REMARKS

Claims 1-20 are presently pending in the present application, with claims 5, 10, 11, and 17-20 having been withdrawn in connection with a prior restriction requirement. Thus claims 1-4, 6-9, and 12-16 have been examined. In this Response claims 1, 15, and 16 have been amended for clarification. Support for these amendments can be found in FIGS. 2, 3, 3A, 3B, 4, 4B, 5, 5C, and 5E and associated text – as examples.

§102(b) Rejection - U.S. Patent No. 6,527,737

The Office Action rejected claims 1-4, 6-9, and 13-16 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,527,737 to Kaneshige.

Claim 1 has been amended for clarification, as shown below.

> 1. A catheter for insertion into a biological conduit comprising:
>
> an elongate catheter shaft having a proximal end and a distal end,
>
> a material collection chamber formed within the catheter shaft,
>
> a controllably arcuate segment formed in the shaft and including at least one opening configured to receive into the shaft a material exteriorly proximate to the at least one opening; and
>
> a sliding member movably disposed within the shaft and configured to selectively traverse the at least one opening to move the material received through the at least one opening into the material collection chamber and away from said at least one opening.

While Applicant contends that original claim 1 was not anticipated by Kaneshige, since Kaneshige does not teach the controllable arcuate segment with at least one opening or sliding member of original claim 1, the distinction is enhanced by the clarifying amendments made to claim 1 herein.

Specifically, the elements from Kaneshige relied on for the rejection of original claim 1 are present in Kaneshige's FIGS. 6a and 6b, as examples, which are reproduced below.

FIG. 6a

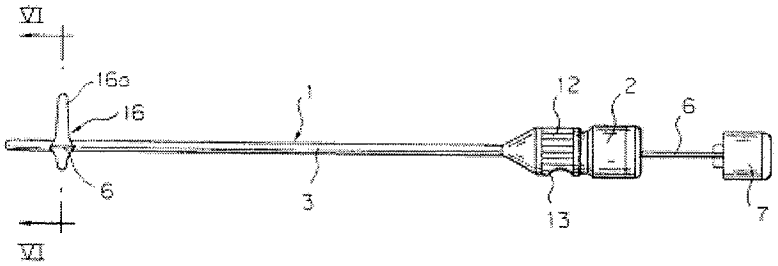
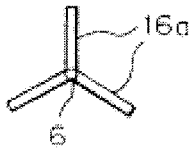


FIG. 6b



In Kaneshige, the catheter 1 includes an expandable malecot portion 16, which is unexpanded for insertion and removal of the catheter into a bladder. When guide wire 6 is pulled away from malecot tube 3 the "three tape-shaped portions 16a constituting the malecot portion 16 buckle to permit the malecot portion 16 to expand as shown in FIGS. 6a and 6b." (*Kaneshige*, col. 7, lines 28-31) FIG. 6b shows a view looking along the axis of guide wire 6. "The malecot portion 16 can be prevented from being pulled out of the bladder 21 since the expanded malecot portion 16 serves as a stopper, thereby the catheter 1 is retained in the bladder." (*Kaneshige*, col. 8, lines 1-4; see also FIG. 2) The malecot portion 16 (and its three tape-shaped portions 16a) is formed, therefore, to maintain the catheter in place, as a "stopper" – not to collect material as in claim 1.

Applicant contends that the buckling of malecot portion 16, as shown in FIGS. 6a and 6b, does not structurally or functionally result in an "arcuate segment" or "at least one opening configured to receive into the shaft a material" as in claim 1.

Certainly Kaneshige does not teach a "sliding member movably disposed within the shaft and configured to selectively traverse the at least one opening" as in amended claim 1, such as, for example, sliding member 100 shown in FIGS. 1A-B, 2, 3A, 4B, 5, 5C, and 5E. The Office Action likened the sliding member of claim 1 to guide wire 6 of Kaneshige. However, if there is any element of the present invention that arguably corresponds to guide wire 6 of Kaneshige it would be a guide wire disposed within "linkage 30" – not the sliding member, as will be appreciated from FIGS. 3A and 4B of the present application reproduced and annotated below.

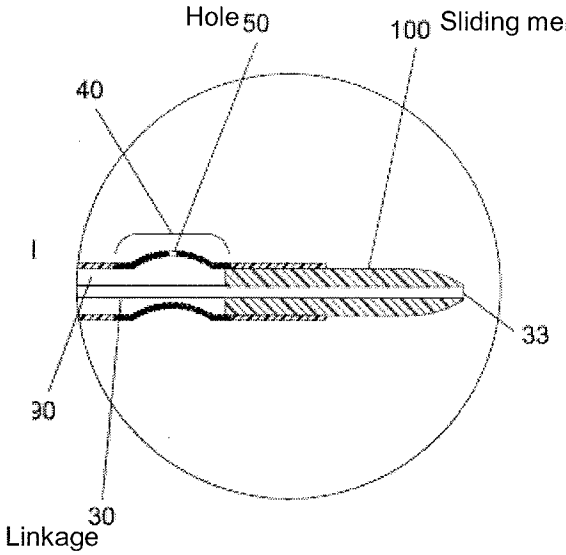


Fig. 3B

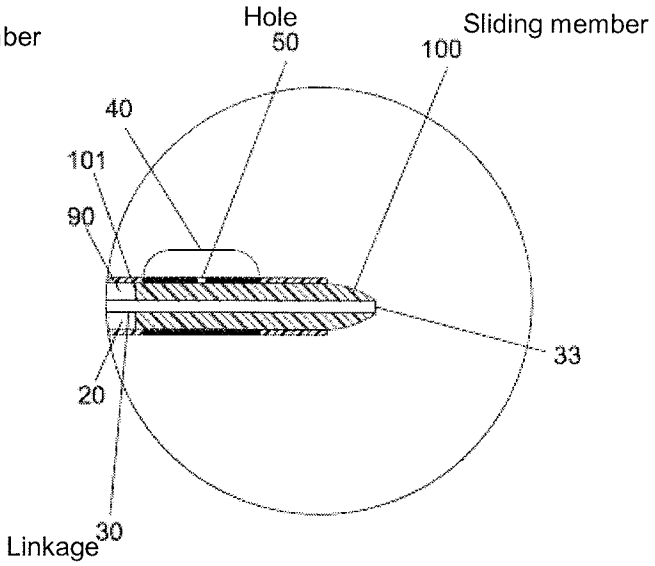


Fig. 4B

From the above figures it is clear that the sliding member slides within the shaft to selectively traverse the opening (e.g., hole 50) of the arcuate segment (e.g., segment 40).

In fact, the sliding member of claim 1 is not present in Kaneshige. However, Kaneshige does not show any such member, and Kaneshige's guide wire 6 is not similar in structure or function. Thus, Kaneshige does not teach "a sliding member movably disposed within the shaft and *configured to selectively traverse the at least one opening* to move the material received through the at least one opening into the material collection chamber and away from said opening," as in amended claim 1.

Therefore, claim 1 is not anticipated under 35 U.S.C. §102(b) by Kaneshige. Accordingly, Applicant requests reconsideration and withdrawal of the rejection to claim 1.

Claims 2-4, 6-9, and 13-14 each directly or indirectly depend from independent claim 1, discussed in detail above.

With respect to claim 2, as with claim 1 from which it depends, Kaneshige does not anticipate the catheter of claim 2, which further comprises "suction means near the proximal end, said suction means in fluid communication with the opening in the

controllably arcuate segment." Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claim 2.

With respect to claim 3, as with claim 1 from which it depends, Kaneshige does not anticipate the catheter of claim 3, which further comprises "an aspiration chamber near the proximal end, said aspiration chamber in fluid communication with the material collection chamber." Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claim 3.

With respect to claim 4, as with claim 3 from which claim 4 depends, Kanesshige does not anticipate the catheter of claim 4, which further comprises "a one-way valve located between the aspiration chamber and the material collection chamber, said valve oriented to allow material to flow from the material collection chamber to the aspiration port." Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claim 4.

With respect to claim 6, as with claim 1 from which it depends, Kaneshige does not anticipate the catheter of claim 6, "wherein the material collection chamber is proximal to the controllably arcuate segment." Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claim 6.

With respect to claim 7, as with claim 1 from which it depends, Kaneshige does not anticipate the catheter of claim 7, which further comprises "a material extraction lumen between the distal end of the catheter shaft and an aspiration port located on the proximal portion of the device." Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claim 7.

With respect to claim 8, as with claim 1 from which it depends, Kaneshige does not anticipate the catheter of claim 8, "wherein the controllably arcuate segment has a normally bowed bias." Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claim 8.

With respect to claim 9, as with claim 8 from which claim 9 depends, Kaneshige does not anticipate the catheter of claim 9, "wherein positioning of the sliding member within the controllably arcuate segment causes said arcuate segment to be relatively

straight." Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claim 9.

With respect to claim 13, as with claim 1 from which it depends, Kaneshige does not anticipate the catheter of claim 13, "wherein the sliding member is attached to a flexible shaft, said shaft traversing the length of the catheter and said sliding member advanced and retracted by advancing and retracting said shaft from controls located on the proximal end of said catheter." Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claim 13.

With respect to claim 14, as with claim 1, Kaneshige does not anticipate the catheter of claim 14, which further comprises "a rotational orientation element." Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claim 14.

Claim 15 is an independent claim that has been amended for clarification herein, and is reproduced below in amended form.

> 15. A catheter for insertion into a biological conduit comprising:
>
> an elongate catheter shaft having a proximal end and a distal end;
>
> an aspiration chamber located near the proximal end, the aspiration chamber having an aspiration port configured to receive a vacuum input;
>
> a controllably arcuate segment formed in the shaft and including at least one opening configured to receive into the shaft a material exteriorly proximate to the at least one opening; and
>
> an aspiration lumen configured to form a vacuum path between the aspiration chamber and the at least one opening when the vacuum input is applied to the aspiration port.

While Applicant contends that original claim 15 was not anticipated by Kaneshige, since Kaneshige does not teach the controllable arcuate segment with at least one opening of original claim 15, the distinction is enhanced by the clarifying amendments made to claim 15 herein.

The Office Action did not note any specific elements of Kaneshige that allegedly taught the elements of claim 15. Since no specific grounds for the rejection have been given, the Applicant requests removal of the rejection to claim 15.

Additionally, the Applicant notes that claim 15 has been amended to clarify that the structure of claim 15 forms a vacuum path between the at least one opening and the aspiration lumen. As described throughout the specification, this structure can be used to draw material (e.g., thrombus) through the at least one opening and into the shaft for removal from a vein or artery, as examples. Kaneshige does not anticipate such a structure with its three tape-shaped portions 16a of malecot portion 16 configured to buckle during expansion to prevent removal of its catheter from a bladder. Accordingly, for these additional reasons, Applicant requests reconsideration and withdrawal of the rejection of claim 15.

With respect to claim 16, as with claim 15 from which it depends, Kaneshige does not anticipate the catheter of claim 16, which further comprises "a sliding member movably disposed within the shaft and configured to selectively traverse the at least one opening to move the material received through the at least one opening away from said at least one opening and toward the aspiration chamber." In particular, this element is similar to the sliding member element of independent claim 1, discussed in detail above. Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claim 16.

§102(b) Rejection - U.S. Patent No. 6,017,323

The Office Action rejected claims 1-3, 6-8, and 12-16 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,017,323 to Chee.

While Applicant contends that original claim 1 was not anticipated by Chee, since Chee does not teach the controllable arcuate segment with at least one opening or sliding member of original claim 1, the distinction is enhanced by the clarifying amendments made to claim 1 herein.

Specifically, the elements from Chee relied on for the rejection of original claim 1 are present in Chee's FIG. 2A, as an example, which is reproduced and annotated below.

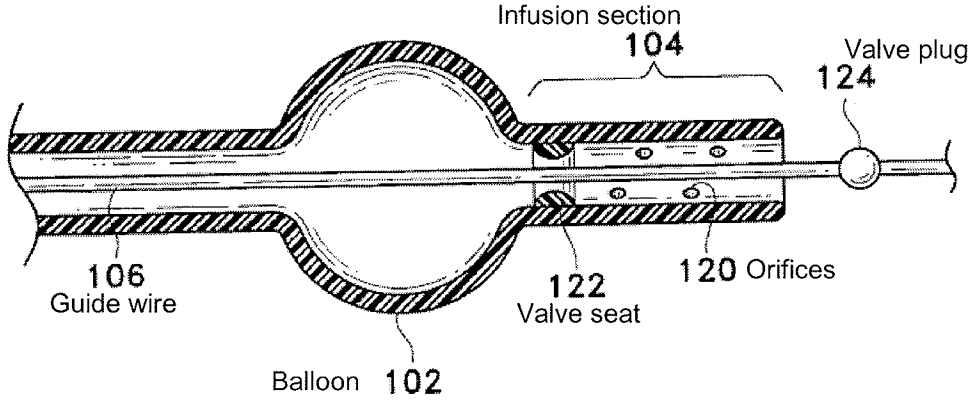


Fig. 2A

Chee explains its FIG. 2A as follows:

> In FIG. 2A, the infusion section (**104**) has several orifices (**120**) passing from the inner lumen to the exterior of the infusion section (**104**). More specifically, the infusion section contains a valve seat (**122**) placed proximally in the infusion section (**104**). The core wire (**106**) incorporates a valve plug (**124**) which is, in relation to the valve seat (**122**), distal to that valve seat (**122**). In this way, the core wire (**106**) may be used as a guidewire if so desired. The valve plug (**124**) is of a size which cooperates the valve seat (**122**) to close the lumen to flow a fluid either distally from the end of the infusion section (**104**) or radially through the infusion ports or orifices (**120**). Addition of fluid to the catheter assembly proximally of the thus-closed valve seat will tend to inflate the balloon (**102**). The balloon (**102**) may be either elastic or of a fixed size and, hence, not elastic.
>
> *Chee*, col. 5 lines 48-62

There is an important and fundamental structural and functional difference in the catheter of claim 1 and that of Chee, as referenced in the Office Action and shown and described above by Chee. Chee's orifices 120 are explicitly not in the balloon 102 in Chee, whereas the arcuate segment of claim 1 includes at least one hole. The orifices are in the infusion section 104, which Chee does not teach as being controllably arcuate.

In fact, the valve seat 122 and valve plug 124 in Chee separate the orifices 120 from balloon 102 so the balloon can be expanded. For example, from the above passage,

"Addition of fluid to the catheter assembly proximally of the thus-closed valve seat will tend to inflate the balloon (102)." It stands to reason that if the valve were not closed the fluid would flow out of the orifices and the balloon would not inflate. It also follows that putting openings in the balloon (if considered an "arcuate segment" as in claim 1) would thwart any chance of expanding the balloon. Thus, Chee teaches away from claim 1, which includes "a controllably arcuate segment formed in the shaft and including at least one opening configured to receive into the shaft a material exteriorly proximate to the at least one opening."

The Office Action likens valve plug 124 of Chee to the "sliding member" of claim 1. However, as should now be evident, Chee's valve plug 124 does not anticipate "a sliding member movably disposed within the shaft and configured to selectively traverse the at least one opening to move the material received through the at least one opening into the material collection chamber and away from said at least one opening," as in amended claim 1. Chee's valve plug is merely configured to create a seal between balloon 102 and fusion section 104 (and its orifices 120).

Therefore, claim 1 is not anticipated under 35 U.S.C. §102(b) by Chee. Accordingly, Applicant requests reconsideration and withdrawal of the rejection to claim 1.

Claims 2-3, 6-8, and 12-14 each directly or indirectly depend from independent claim 1, discussed in detail above.

With respect to claim 2, as with claim 1 from which it depends, Chee does not anticipate the catheter of claim 2, which further comprises "suction means near the proximal end, said suction means in fluid communication with the opening in the controllably arcuate segment." Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claim 2.

With respect to claim 3, as with claim 1 from which it depends, Chee does not anticipate the catheter of claim 3, which further comprises "an aspiration chamber near the proximal end, said aspiration chamber in fluid communication with the material collection chamber." Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claim 3.

With respect to claim 6, as with claim 1 from which it depends, Chee does not anticipate the catheter of claim 6, "wherein the material collection chamber is proximal to the controllably arcuate segment." Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claim 6.

With respect to claim 7, as with claim 1 from which it depends, Chee does not anticipate the catheter of claim 7, which further comprises "a material extraction lumen between the distal end of the catheter shaft and an aspiration port located on the proximal portion of the device." Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claim 7.

With respect to claim 8, as with claim 1 from which it depends, Chee does not anticipate the catheter of claim 8, "wherein the controllably arcuate segment has a normally bowed bias." Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claim 8.

With respect to claim 12, as with claim 1 from which it depends, Chee does not anticipate the catheter of claim 12, "wherein the sliding member has a cutting edge on the end facing the opening in the controllably arcuate segment." In fact, there is not mention in Chee that its valve plug 124, which the Office Action likens to the sliding member of claim 1, includes a "cutting edge." In fact, a valve plug 124 with a cutting edge facing its balloon would likely damage the valve seat 122 with which the valve plug needs to mate to create a seal. Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claim 12.

With respect to claim 13, as with claim 1 from which it depends, Chee does not anticipate the catheter of claim 13, "wherein the sliding member is attached to a flexible shaft, said shaft traversing the length of the catheter and said sliding member advanced and retracted by advancing and retracting said shaft from controls located on the proximal end of said catheter." Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claim 13.

With respect to claim 14, as with claim 1 from which it depends, Chee does not anticipate the catheter of claim 14, which further comprises "a rotational orientation

element." Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claim 14.

With respect to claim 15, while Applicant contends that original claim 15 was not anticipated by Chee, since Chee does not teach the controllable arcuate segment with at least one opening of original claim 15, the distinction is enhanced by the clarifying amendments made to claim 15 herein.

The Office Action did not note any specific elements of Chee that allegedly taught the elements of claim 15 on page 3 of the Office Action. Since no specific grounds for the rejection have been given, the Applicant requests removal of the rejection to claim 15.

Additionally, claim 15 includes a controllably arcuate segment having at least one opening therein, similar to claim 1. As discussed in detail with respect to claim 1, Chee absolutely does not teach this.

Also, the Applicant notes that claim 15 has been amended to clarify that the structure of claim 15 forms a vacuum path between the at least one opening and the aspiration lumen. As described in throughout the specification, this structure can be used to draw material (e.g., thrombus) through the at least one opening and into the shaft for removal from a vein or artery, as examples. Chee does not anticipate such a structure. Accordingly, for these additional reasons, Applicant requests reconsideration and withdrawal of the rejection of claim 15.

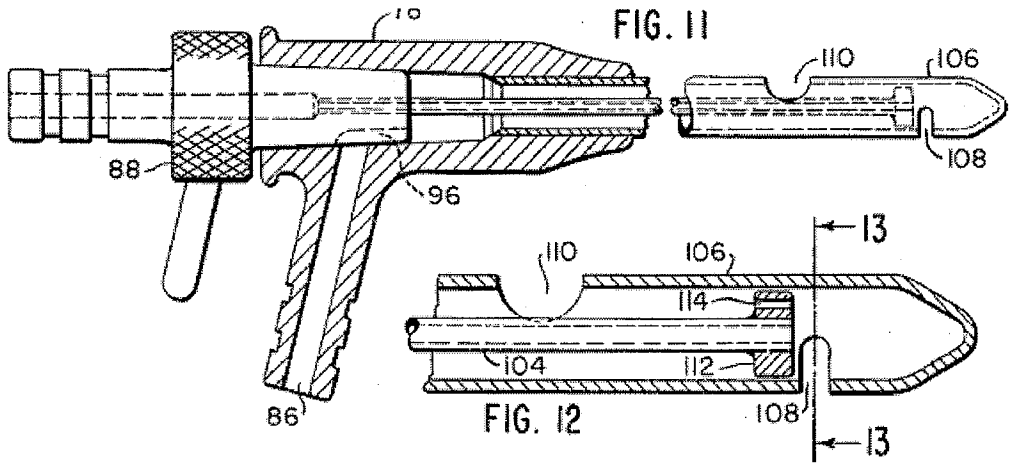
With respect to claim 16, as with claim 15 from which it depends, Chee does not anticipate the catheter of claim 16, which further comprises "a sliding member movably disposed within the shaft and configured to selectively traverse the at least one opening to move the material received through the at least one opening away from said at least one opening and toward the aspiration chamber." In particular, this element is similar to the sliding member element of independent claim 1, discussed in detail above. Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claim 16.

§102(b) Rejection - U.S. Patent No. 3,081,770

The Office Action rejected claims 1-7 and 13-16 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 3,081,770 to Hunter. However, since claim 5 has been withdrawn from consideration, Applicant presumes that the Examiner intended rejection of claims 1-4, 6, 7, and 13-16.

While Applicant contends that original claim 1 was not anticipated by Hunter, since Hunter does not teach the controllable arcuate segment with at least one opening or sliding member of original claim 1, the distinction is enhanced by the clarifying amendments made to claim 1 herein.

Specifically, the elements from Hunter relied on for the rejection of original claim 1 are present in Hunter's FIGS. 10, 11, and 12, as examples. FIGS. 11 and 12 are reproduced below.



As evident from these figures, Hunter does not teach "a controllably arcuate segment formed in the shaft and including at least one opening configured to receive into the shaft a material exteriorly proximate to the at least one opening," as in amended claim 1.

The Office Action states that "any catheter or needle that can be bent is controllably arcuate." However, Hunter does not disclose that its needle 106 is flexible. More importantly, as described within the present application, a controllably arcuate segment is one that can selectively take a bow shape under some form of control. Hunter

does not disclose bending its needle 106, which the Office Action likens to a controllably arcute segment of claim 1, nor does Hunter disclose any mechanisms to controllably do so.

Additionally, Hunter does not teach a "sliding member movably disposed within the shaft and configured to selectively traverse the at least one opening" as in amended claim 1, such as, for example, sliding member 100 shown in FIGS. 1A-B, 2, 3A, 4B, 5, 5C, and 5E. The Office Action likened the sliding member of claim 1 to collar 112 of Hunter, which "is secured about the end tip of the injection needle to serve as a baffle between the injection port 108 and the drain 110." (*Hunter*, col. 5, lines 37-39) However, the secured baffle 112 of Hunter does not anticipate the sliding member of claim 1, nor does it appear to be taught as traversing openings 108 and 110 of Hunter, which the Office Action likened to the at least one opening of claim 1.

Therefore, for a variety of reasons, the catheter of claim 1 is not anticipated under 35 U.S.C. §102(b) by the surgical needle of Hunter. Accordingly, Applicant requests reconsideration and withdrawal of the rejection to claim 1.

Claims 2-4, 6, 7, and 13-16 each directly or indirectly depend from independent claim 1, discussed in detail above.

With respect to claim 2, as with claim 1 from which it depends, Hunter does not anticipate the catheter of claim 2, which further comprises "suction means near the proximal end, said suction means in fluid communication with the opening in the controllably arcuate segment." Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claim 2.

With respect to claim 3, as with claim 1 from which it depends, Hunter does not anticipate the catheter of claim 3, which further comprises "an aspiration chamber near the proximal end, said aspiration chamber in fluid communication with the material collection chamber." Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claim 3.

With respect to claim 4, as with claim 3 from which it depends, Hunter does not anticipate the catheter of claim 4, which further comprises "a one-way valve located between the aspiration chamber and the material collection chamber, said valve oriented

to allow material to flow from the material collection chamber to the aspiration port." Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claim 4.

With respect to claim 6, as with claim 1 from which it depends, Hunter does not anticipate the catheter of claim 6, "wherein the material collection chamber is proximal to the controllably arcuate segment." Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claim 6.

With respect to claim 7, as with claim 1 from which it depends, Hunter does not anticipate the catheter of claim 7, which further comprises "a material extraction lumen between the distal end of the catheter shaft and an aspiration port located on the proximal portion of the device." Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claim 7.

With respect to claim 13, as with claim 1 from which it depends, Hunter does not anticipate the catheter of claim 13, "wherein the sliding member is attached to a flexible shaft, said shaft traversing the length of the catheter and said sliding member advanced and retracted by advancing and retracting said shaft from controls located on the proximal end of said catheter." Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claim 13.

With respect to claim 14, as with claim 1 from which it depends, Hunter does not anticipate the catheter of claim 14, which further comprises "a rotational orientation element." Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claim 14.

With respect to claim 15, while Applicant contends that original claim 15 was not anticipated by Hunter, since Hunter does not teach the controllable arcuate segment with at least one opening of original claim 15, the distinction is enhanced by the clarifying amendments made to claim 15 herein.

The Office Action did not note any specific elements of Hunter that allegedly taught the elements of claim 15 on pages 3-4 of the Office Action. Since no specific grounds for the rejection have been given, the Applicant requests removal of the rejection.

Additionally, claim 15 includes a controllably arcuate segment having at least one opening therein, similar to claim 1. As discussed in detail with respect to claim 1, Hunter does not teach this.

Also, the Applicant notes that claim 15 has been amended to clarify that the structure of claim 15 forms a vacuum path between the at least one opening and the aspiration lumen. As described in throughout the specification, this structure can be used to draw material (e.g., thrombus) through the at least one opening and into the shaft for removal from a vein or artery, as examples. Hunter does not anticipate such a structure. Accordingly, for these additional reasons, Applicant requests reconsideration and withdrawal of the rejection of claim 15.

With respect to claim 16, as with claim 15 from which it depends, Hunter does not anticipate the catheter of claim 16, which further comprises "a sliding member movably disposed within the shaft and configured to selectively traverse the at least one opening to move the material received through the at least one opening away from said at least one opening and toward the aspiration chamber." In particular, this element is similar to the sliding member element of independent claim 1, discussed in detail above. Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claim 16.

Closing Remarks

It is submitted that all of examined claims 1-4, 6-9, and 12-16 are in condition for allowance, and such allowance is respectfully requested. If prosecution of the application can be expedited by a telephone conference, the Examiner is invited to call the undersigned at the number given below.

Authorization is hereby given to charge Deposit Account No. 501798 for all otherwise unpaid fees due with this response.

Respectfully submitted,

Date: May 1, 2007

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